principal symptoms of this case, Kjellberg gives the history of a case which came under his own care, the patient being only 5 years of age. It was especially remarkable for its rapid course, and very characteristic symptoms, such as discoloration of the skin, which became of a yellowish waxy color, pallor of the lips, great prostration, asthma on the least exertion, palpitations, intense anæmic bruit, retinal hemorrhages, watery-looking blood, and reduction of the number of red disks to 0.571 million per cubic millimetre. The *post-mortem* appearances were also very characteristic ; extensive fatty degeneration of muscular structure of the heart, excessive pallor of the cerebral substance, hemorrhages of the cerebellum, pericardium, pleura, lungs, and peritoneum, and fatty degeneration of the epithelium of the renal tubules.

From the knowledge gained from Quincke's case and his own, Kjellberg concludes that pernicious anæmia presents the same symptomatology in childhood as in adult life.

This case throws but little light on the etiology of pernicious anæmia; and gives no ground for the hypothesis that this disease is the result of a life of privation and of insufficient nutrition, for this child was in comparatively good circumstances. Kjellberg is rather inclined to indorse the opinion of Warfringe that pernicious anæmia should be considered as an infectious disease. His patient was put on arsenic, with nourishing food, but with no noticeable result.—*Nordiskt Medicinskt Arkiv*, Bd. xvi. Hft. 13.

The Nature of Fever, and the Cold-Water Treatment of Fever.

B. NAUNYN has recently contributed an article on this subject to the *Archiv für Experim. Pathol. und Pharmacie*, Bd. xviii., Hft. 1 u. 2. In this article he calls especial attention to the experiments of Liebermeister and Jürgensen, which, in spite of their one-sided character, have received very general recognition. Naunyn draws a sharp line of separation in fever as to the danger of increased temperature, and the severity of the disease causing it, of which fever is only a symptom. He has experimentally studied the dangers of over-heating the organism, where there is no general disease, by placing rabbits in a specially constructed apparatus. The result of these experiments was that completely healthy normal rabbits bore a temperature of 107.6° Fahr. for from one day to one week, and for the most part without injury ; but that a temperature of 108.5° or 109.4° Fahr. was dangerous and fatal. He leaves out of his discussion, insolation and intense hyperpyrexia, for which he advises prompt treatment with cold water.

In discussing the febrile diseases, pneumonia, typhoid fever, relapsing fever, scarlatina, etc., he concludes that the high temperature is absolutely of no moment as an element of danger. A very clear example is seen in relapsing fever in which, as is well known, high temperature is the rule, reaching a degree seldom seen in other diseases, and which may persist for a long time without injury to the patient, but not usually considered dangerous by physicians. So also in typhoid fever in which low temperatures are observed (seldom over 102.2° Fahr.), but which are accompanied by severe general disturbances, the patient recovering more slowly and with more difficulty than from cases which are similar except as regards the presence of higher temperature. The same is seen in other acute febrile diseases. Naunyn thinks, therefore, that observations as to the temperature in febrile diseases are of more importance as a rule than of any other single symptom, especially since we have no such certain means of measuring other symptoms as by the thermometer in abnormal temperature.

Naunyn cannot regard Liebermeister's definition of temperature as correct.

We have no right, he thinks, to regard the functional disturbances which take place in single organs during fever, as the consequence of the fever. Fever is a symptom, with which the other pathological phenomena, as disturbances of the nervous system, of the circulatory apparatus and of nutritive changes, occur as coördinate symptoms, and the occurrence of all these single symptoms is the acute affection.

He has also made extensive researches in the acute infectious diseases as to the nutritive changes, the changes of the blood in fever, the circulatory disturbances, and those of the organs of secretion. In these he was assisted by Dr. MINKOWSKI, who, in examining the blood of fevered dogs, found no constant changes in the blood disks. But he found in the same blood an abnormal acid—fermentable lactic acid. Naunyn also made experiments on the excretion of urine and on the occasional presence of carbonate of ammonium in fevered persons. In one case of petechial typhus, he found, on the second day after the crisis, ninety-one grams of urea, and in a second case, on the third and fourth days after the commencement of the fever, one hundred and sixty grams. Nothing conclusive was found as to the presence of carbonate of ammonia in the blood.

After discussing the nature of the febrile process, Naunyn develops the grounds upon which he recommends the hydriatic treatment of fever, and the rules by which one should be guided. He restricts the cold-water treatment (except in cases of insolation and intense hyperpyrexia) entirely to typhoid fever, as statistics have not yet shown that it has a favorable influence upon the course of other acute febrile diseases. But other antipyretics, as salicylate of soda and quinine, never act so well in typhoid fever as the cold-water treatment. The rules which he gives for this treatment, in the course of typhoid fever, are mainly as follows: He prescribes complete baths only, dividing them into: 1, cold baths, between 72.5° and 81.5° Fahr.; 2, lukewarm, between 81.5° and 90.5° Fahr.; 3, warm baths, between 90.5° and 95° Fahr. Typhoid fever patients should be placed in the bath, as a rule, as soon as the temperature in the axilla reaches 103.1° Fahr. The frequency of the baths should depend upon the temperature of the patient. The temperature should be taken every three hours, and a bath given. Baths of 77° Fahr. are most frequently used at first, and then of 83.2° or 86° Fahr., but never under 72.5°. The patients should be bathed at night as well as during the day. The cold bath should last from five to ten minutes, the lukewarm from ten to fifteen, according to the susceptibility of the patient. After the bath warm wine or grog should be given. If baths at these temperatures have no favorable effect, and the patient cannot be warmed and shows symptoms of collapse, the bath should be 4° or 5° higher. If the temperature does not fall sufficiently with baths at this temperature, or if it soon rises again after the bath, the water may be made somewhat cooler, or the patient may be bathed oftener, and before the temperature reaches 103.1° Fahr.

In severe cases of typhoid fever, with low temperature and pronounced general symptoms, the patient may be bathed with advantage if the axillary temperature reaches 102.2°. In some cases also, cases of violent delirium, warm baths may be given between the cold ones, generally in the afternoon between 6 and 8 P. M. The influence of these warm baths is, as a rule, very good. In connection with the bath-treatment, Naunyn places great reliance upon a careful dietary regimen.—*Centralb. für klin. Med.*, Sept. 13, 1884.

An Analysis of Cases of Diphtheria.

At a recent meeting of the Berlin Medical Society, Dr. HENOCH read a paper on diphtheria, as observed in the Charité Hospital in the years 1882 and 1883,